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AUTHOR Malcolm, Clifford K.; Owen, John M.
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ABSTRACT

To enhance the professional development of teachers and encourage an ongoing climate of innovation and reform, while providing for direct benefits for students, Australia's Schools Commission instituted a program allowing funds for curricular innovation to be granted directly to teachers. Interviews with a random sample of 45 of these grantees, whose projects were completed in 1978 and 1979, provided data from which several general conclusions could be drawn: first, many grantees stepped by choice into stressful situations; second, most of the grantees were aware of and valued the professional development prospects inherent in their projects; third, a wide consensus existed on the direction of change constituting professional growth for teachers, and grantees were considerably influenced by this view of professionalism; fourth, professional growth occurred primarily during project implementation, though some aspects of growth also occurred during the evaluation phase; fifth, most teachers felt their projects had a positive impact on their colleagues, school morale, and school-community relations; and sixth, the extent of personal change in grantees was more closely linked to the time and effort they committed to their projects than to the type, cost, or setting of the projects. (Author/PGD)

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EFFECTS OF THE INNOVATIONS PROGRAM ON TEACHER DEVELOPMENT [1]

Clifford K Malcolm and John M Owen
Melbourne State College

Introduction

The central purpose of curriculum innovation is to benefit students. It is also beneficial to the teachers involved. The study discussed in this paper was designed to assess the professional growth of teachers whose innovatory projects were funded by the Australian Schools Commission's "Innovations Program".

Over the past two decades, most of the research on curriculum change has been concentrated on the effects of innovations developed in the Research, Development and Diffusion (R, D and D) tradition. Whereas early research investigated the characteristics of the materials produced in this way, more recent studies have recognised school factors, including the professional characteristics of teachers, as important determinants of successful innovation (Havelock, 1973; Fullan and Pomfret, 1977; Fullan, 1979). The reverse effect, that teachers' professional characteristics could be modified *as a result* of experience with innovation, has received very little attention.

In Australia, the Karmel Report (1973) supported school based curriculum development by recommending that funds for innovation be offered directly to teachers. As well as having a direct impact on students, it was argued that such an approach would enhance the professional development of the teachers involved and encourage an ongoing climate of innovation and reform. Teacher development became a stated objective of the Schools Commission's Innovations Program.

As part of an evaluation of this Program, we were commissioned to gather descriptions of the experience of the teachers (called grantees by the Schools Commission) in developing, implementing and evaluating their

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projects, and to measure the extent of personal and professional change which occurred as a result of those experiences. This paper focusses on the latter aspect. The full report of the investigation will be published shortly by the Schools Commission (Malcolm and Owen, 1981).

As a commissioned evaluation, the study was undertaken in close and fruitful co-operation with the primary audience, the National Innovations Committee of the Schools Commission. Thus the purposes of the study, the basic methodology and the form of the reports were decided in collaboration between the primary audience and the evaluators.

The Innovations Program

At the base of the Innovations Program is the assumption that innovations have greater impact in their local settings if they are initiated by the people responsible for their implementation.

This approach to change is summarised by the following statement of what is called the Problem Solving (P-S) paradigm .

> In the P-S perspective, the individual (or group) initiates the process of change by identifying an area of concern or sensing a need for change. Once the problem area is identified, the individual undertakes to alter the situation either through his own efforts, or by recruiting suitable outside assistance. The user in the P-S model is actively involved in finding an innovation to solve his own problem. Specifically, what the new input will be is determined largely by the receiver himself; whether or not this same input could also satisfy the needs of other receivers (ie. mass diffusion) is not generally considered. (Havelock, 1973: 10-29)

Grants are awarded to individuals (usually teachers), and are backed up by counselling support (especially during the preparation of proposals) and "communication and dissemination networks." Proposals must be "innovative in their settings" rather than innovative in general. Individual innovators have the freedom to generate new goals for education in a particular setting and new organizational structures, as well as new teaching- learning approaches. The Commission, while encouraging diversity, retains a measure of control over the direction of change through its "guidelines to applicants" and its funding decisions.

Change is thus guided by the Commission's rationale; social ideals of equality of opportunity, openness, and cooperative school-community relationships.

Theoretical Perspectives and Data Collection

The evaluation was conceived of as an exploratory investigation of the impact of the Program. This was partly because of the novelty of the topic. Writers such as Havelock (1973) and Guskin (1973), in their discussions of innovative teachers, and Argyris (1976) and Becker (1960), in their discussion of personal growth, emphasize the complexity and individuality of relationships between experience and personal change. Guskin (1973) links professional behaviour with self esteem. The very nature of the criteria led us to the conclusion that the teachers' own perceptions of personal change were valid measures of professional impact.

For these reasons, and because we wished to document individual experience, it was decided to interview grantees whose projects were recently completed. The grantees were asked to reflect on the impact of their projects on themselves and to recount their experiences in a way which illuminated the changes they perceived. Each interview lasted approximately an hour. In preparation for the interviews, we studied the grantees' project descriptions, and in most cases, the final evaluation reports. At the conclusion of the interview each grantee completed a self-rating questionnaire. This was composed of Likert type scales which were designed to measure the extent of change on selected dimensions for which we felt interviewer rating was especially difficult. In this sense the questionnaire complemented the interview.

The interview style employed was an open, personal one, ostensibly only loosely structured, but built around a detailed checklist. We wished to obtain comparable information from each grantee but at the same time to allow freedom for retrospective analysis and interpretation according to the individual's own perspective, and expressive style. The interview sought evidence of change in activities, responsibilities,

interests and linkage. It also explored motivation, rewards, barriers and facilitators to implementation, and the influence of these on decisions made during the project.

The questionnaire included questions on the novelty and the time demands of the project; personal attributes such as confidence, enthusiasm, independence and adventurousness; professional competence in a number of areas;beliefs about the purposes and practices of education; and perceptions of the grantee's role in the school and beyond. In both the questionnaire and the interview, the emphasis was on measuring increments rather than absolutes.

From projects formally completed in 1978-79, a stratified random sample of fifteen grantees was chosen in each of three areas; rural Victoria, metropolitan New South Wales (Greater Sydney) and the entire state of Western Australia. The resulting sample represented the population in each geographical area in terms of project cost, project type, school system, and the level of schooling in which the project was implemented (Owen and Malcolm, 1981).

The resulting data is contained in 600 pages of interview transcripts, questionnaire results and evaluation reports. In analysis, each case was studied as an entity. Generalisations across cases were then sought, assisted by cluster analysis of the questionnaire results. A striking consistency between questionnaire responses and interview data emerged in these processes.

Generalizations

From these procedures a number of general statements about the Innovations Program can be made. These are listed below.

1. A criterion for the funding of projects is that they should be novel in their settings. In general, projects were also novel in terms of the grantee's background and experience. As well there were many cases where the grant coincided with a change in job specification or work setting. Thus, many of the grantees stepped by choice into situations which promised stress.

2. Most of the grantees embarked on their projects aware of the professional development prospects inherent for them and their colleagues, and valued those prospects.

3. There was a wide consensus on the direction of change that constitutes growth. This consensus, along with the value statements and ideologies contained in the interview transcripts, offered a clear view of the "professional teacher". This ideal had considerable influence on the teachers' behaviour.

4. In most of the categories of professional development we considered, growth occurred most frequently during the implementation phase of the project rather than earlier or later. The exceptions were re-appraisal of roles in the classroom, the school and beyond which often occurred during and after the evaluation phase of the innovation.

5. Almost all teachers reported positive impact of their projects and their activities on their colleagues, often resulting in general heightening of morale in the school and its community of parents.

6. The extent of personal change in grantees could not be predicted from the type or cost of the project, or the characteristics of the setting in which it was implemented. However, there was a link between the extent of growth and the time and effort grantees committed to their projects.

In the next section, some of the points are reconsidered and analysed in finer detail.

The Nature and Extent of Professional Growth

From Foyster's (1979) study, we were aware that grantees were a selected, highly committed and well respected group of teachers. The average grantee was about 35 years old, had been teaching for some ten years, and was already in a leadership position when the grant was awarded. We expected that such people might take their projects very much in stride and that any growth effects might be small and hard to identify.

The results are to the contrary. The data showed that professional growth was high and wide-ranging for about two-thirds of the grantees, and small for about 15 percent. For the remainder, there were gains on some aspects of professional growth. High gains (scores of four or five on a five point scale) were recorded by the majority of teachers on most aspects covered by the questionnaire. High gains were reported most often in relevant subject area competence and curriculum programming skills. Small changes were reported most often in classroom competence, philosophical position, and role perceptions.

Cluster analysis of the questionnaire results identified the four groups which classified meaningfully the individual cases.[1] The four groups can be considered to lie on a continuum of what Hoyle (1971) called "extended professionalism". We have used this term even though our meaning is slightly different to Hoyle's. Presumably his classification referred to stable personal characteristics whereas we have arrived at our classification from consideration of change profiles.

Two of our groups have the characteristics of extended professionals. For teachers in the first group (42%), their senses of independence and adventure were greatly increased. They correspondingly expanded and redirected their professional activity, critically reappraised their views on education, and redefined their roles both in the school and beyond. The second group (21%), is similar to the first except that the teachers' philosophical shifts were smaller and the extension of their activities was more in tune with their earlier interests and convictions.

For teachers in the remaining two groups, impact was generally small or confined to a few dimensions of their professional lives. The time demands of their projects were markedly less than in the high impact groups. The third group (15%), we called the "limited expansion" group. It is characterised by small personal change (ie. in confidence, enthusiasm, etc.) and competence gains only in aspects directly related to the particular projects. The teachers reappraised their roles within their institutions, but there was little impact in the broader sphere of professional activity. The fourth group (22%), includes three cases

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[1] Heirarchical Cluster Analysis was used on the questionnaire results.

for whom the impact was minimal and others where the impact ranged upwards towards that typical of the second group. The distinguishing characteristic of this fourth group is that gains in confidence, enthusiasm, independence and adventurousness were reasonably high, but were not accompanied by general gains in competence, or by philosophical reappraisals.

An important finding was that, even though change occurred in only a few aspects of their professional lives, many teachers in the 'low impact' groups reported that the effects of those particular changes were profound. There were clearly cases where the impact of the Innovation Program on teachers was confined to a few dimensions in which very large changes took place.

Finally, it should be emphasised that the classification is based on incremental growth, not absolutes. We made no attempt to compare the 'state of professionalism' of one teacher with another. Teachers in 'low impact' groups may have attained high levels of professional development before their involvement in the Innovations Program, for example. Similarly, although some teachers in an 'extended professional' group might have been adventurous and critical before their involvement, they have only been classified as extended professionals because of the *increase* in their sense of adventure and in their breadth and depth of other changes.

Some Illuminative Examples

The descriptions which follow attempt to convey some of the flavour of the Project implementation.

The Extended Professionals: Group 1

Peter Fowles, James Obeth and Barry Pollack exemplify the group 1 characteristics. Their cases are also interesting because their personalities and their starting points impressed us as being quite different.

Peter Fowles was active in the English Teachers Association, involved in the development of Teacher Centres, and English coordinator at a provincial high school when he was awarded a grant to develop students' use of oral and written language. The project team consisted of a number of teachers from a variety of local primary and secondary schools. The group met fortnightly at the Teacher's Centre to share ideas, plans, and experiences, and soon became a socially cohesive research team investigating student talk and its part in the learning process. They glimpsed a learning theory emerging from their data as their work intensified. The local schools and the Teacher's Centre were supportive from the start. Other professional contacts of Peter's became involved and, as the project gained momentum, so it acquired new sponsors, new supporters and new champions. A flurry of activity culminated in the production of a $30,000 film which has since been shown extensively around Australia. Peter presnted the project and film at a national and then an international conference. The State Curriculum Branch adopted the theory as a basis for curricula in a number of subject areas. The work continues even though the original team has disbanded.

For the team members, that intensive group experience and its achievements had both personal and professional impact. Many can point to unequivocal evidence of growth: new jobs, new leadership positions, new projects, publications. Peter now works in the Curriculum Branch. He is president of the English Teachers Association. He leads guest sessions in the universities and colleges of advanced education. He is working on a joint research venture with college staff. He has extended his interest in student writing and is part of an international group working in that area. As Peter sees it, all that has happened need not be a direct outcome of the Innovations Grant, but it was certainly the leaping-off point.

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James Obeth was a craft teacher at a high school. He was confident of his teaching ability and aware that his record entitled him to a promotion, but he felt that he was not yet ready for it. With a view to expanding his knowledge of schooling he sometimes studied the work of one of his colleagues, Stephen.

The staff recognized a need to provide special assistance for students with social-emotional problems of learning difficulties. Stephen developed a proposal for an Innovations Grant but left the school before the grant was awarded. James had not been involved in the development and had no particular expertise in special education, but the project was interesting to him and he recognized the professional value in taking over its leadership. The principal and staff were committed and supportive but no one knew the details of the proposal. James asked for help and rallied assistance from all sections of the school. He chaired meetings, organised staff, and hired assistants. He developed management, leadership and special education skills as he went, gaining confidence, revising his educational philosophies and redefining his own role. James has since changed schools. He is a senior master now, continuing work in his new field as part of his responsibilities for leadership in the school. At his old school, his program has been institutionalized.

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Barry Pollack had had a few year's experience in a one-teacher primary school before he came to the inner city school in which his project was implemented. The project began with a small grant to throw cushions and other minor furnishings into an underused corridor and convert it to a reading and relaxation centre. Barry was not the original grantee and was only peripherally involved until the original grantee took leave from the school.

A couple of friends of the staff suggested ways of expanding the concept of the project and offered to help. The kids' wishes and hopes were canvassed. Enthusiasm mounted and spread. Ideas came thick and fast. The school and the School Council organised fund raising drives. Business houses became involved and donated cash and equipment. Local high schools and colleges offered students to help with the work. The result is a fantasy of sound, light, and puppetry rivalling Disneyland: here is deep under the ocean, there in the courtyard is the jungle, up in the mezzanine cubby house is the sound and light space spectacular

The children did much of the work. It is their special place. They paint and repaint the murals. They build and rebuild paper mache figures. They produce the sound and light programs, the films and tape-slide sequences. The school organised an official opening on a Friday afternoon. There were 250 parents there, community representatives, television and newspaper reporters, and interested educationists.

Barry's involvement was central. He led staff meetings, organised and co-ordinated the work and the fund drives, sought sponsors, and spent hours working on the design and construction. Educational interest in the project continues. Barry has led in-service days, published articles, given talks and answered letters. He looks back in amazement at the things he has done: "When I first came in to this I was the most afraid person to do anything of a major nature... I think this is the whole thing. Instead of being vertical, I've started to get very horizontal or lateral about everything. I'll have a go..."

The Extended Professionals: Group 2

By comparison with the Group 1 teachers, those in Group 2 reported slightly greater increases in confidence and enthusiasm, but slightly smaller increases in their senses of independence and adventure. Their projects were less novel but more demanding. They have been less inclined to shift their philosophical positions and have extended their activities more according to their earlier convictions and growing expertise. Their competence gains were smaller - especially in administration areas, but also in curriculum areas.

Gloria Dyson and David Hodgkin are characteristic of this group.

Gloria teaches home economics in a girls secondary school. The girls come from rural backgrounds, board at the school and intend to return to their rural environments. Gloria's project was to develop a program in cake decorating. Some years earlier she had been active in running night classes in the art, but family and work pressures had required that she set aside that interest. Her innovations grant

and the initial response of the girls revived her enthusiasm and urged her to expand her expertise and involvement. She joined with a few other women to form a club which, within months, became a State Association of Cake Decorators, with Gloria as its foundation president. The activities of the association and the school project expanded together, reinforcing and assisting one another. The school program expanded from the Home Economics curriculum as a hobby activity for the boarders. The girls were deluged with cake contracts, exhibited successfully at agricultural shows and exhibitions, and responded to invitations to display their work in the central city shopping area. Gloria led inservice days in technique and curriculum for teachers from technical schools, and assisted other teachers informally. Meanwhile the Association expanded dramatically, and with it Gloria's workload. Here she introduced the Premier's wife at the opening of an exhibition, there she attended a book launching for one of the Association members. Coupled with her work as chief executive officer were the regular Association Newsletters to be produced and distributed. The wave of impact spread and within the next year similar associations were established in three other states. Gloria visited them to help them get established and to share ideas.

Gloria's work was not new, but very demanding. Her self confidence, enthusiasm, independence and sense of adventure were greatly enhanced. Her subject competence and classroom skills were increased, but there was little impact on her already well developed skills in curriculum planning and administration. Her confidence and skill in interacting with colleagues grew and she became much more effective in school-community relationships. Her philosophical convictions concerning the purposes and practices of education were strengthened, but not redirected. However, consistent with her expanded activities, she revised her perceptions of what her role should be in the school, in the local setting, and beyond.

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David Hodgkin switched from social work to teaching at age 28. The project school was his first school, a suburban high school. The Principal and staff, concerned about isolation and fragmentation within

the school community, had begun planning a House System to encourage informal interaction of students from different years with each other and staff. David joined the planning team, became one of the House Masters and submitted the grant proposal. Staff commitment was high.

The program operates through small groups sessions, House activities, and full school activities. Details continue to evolve. Teachers and students alike have had to battle with their role changes to work informally in small groups which encompass an age range and where teachers have no structured leadership role. The program does not fit with the traditional administrative organization of the school and has had to resist covert restoring forces which threaten it.

Discomfort was sufficient that teachers questioned whether this sort of pastoral care was part of their professional responsibility and if so, whether the house system was necessary to achieve it. The house masters were under considerable pressure to provide effective leadership. they made mistakes and some staff were openly critical, but they worked hard and the program made considerable impact on the school and community and attracted interest from a number of educators around the country. A small "Association of Housemasters" was formed with David an active member.

Coming close behind his entry to the teaching profession, the project required David to grow quickly into a leadership role. His greatest gains were in professional self confidence, and skills in leadership and management. His commitment to pastoral care programs has increased slightly with his increased understanding and programming skills, but philosophical shifts have been small. His standing with other staff has increased and more responsibilities are being thrust upon him. He has subsequently redefined his role in the school and the local setting: "I've gained a lot of confidence in the job, and I've undertaken a course in Educational Administration which I'll finish this year. I guess that's because I gained confidence, and one day I might be looking for a permanent promotion to the (leadership) area....."

Limited Expansion: Group 3

The group is small and fairly homogenous. Projects undertaken by teachers in this group were markedly less demanding than projects in Groups 1 and 2, but similarly new in terms of the teachers' past experience. The impact on self-confidence was small and indeed significant change has only occurred in those aspects of their professional lives impinged upon directly by their projects.

Noel Browne is an Art Teacher who enjoys art and students but does not wish to be involved in school leadership. He and his students set out to design and erect tiled panels, big and small, on as many blank walls as they could find inside and outside the school. Noel sees their greatest achievement as the "Sun Wall" and is enthusiastic about work now in progress on the "Brotherhood of Man" wall. School and community responses to their work has been positive, but for Noel there is more satisfaction in the action than in the achievement. Before coming to the school he had not worked with ceramics, nor been involved in public art: "I suppose in a reflective sort of mood, it's broadened my attitude towards Art and its relationship to people...."

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Fr Tim is headmaster of a large boarding school for boys. He is at various times "their principal, teacher, friend, father and priest" and one suspects that he does all these things capably. His project was to enliven interest in the school's history through pageantry and re-enactment. The horse artillery lives again.

Fr Tim had no background in army procedures or cavalry skills, so had to work closely with retired colonels, army personnel and historians. The venture has been very successful both in terms of the project goals and spin-off effects for the school. Through his studies and his work with army personnel and the general public, Fr Tim "discovered a whole new way of life." He learnt to interact with the boys in "yet another way", but overall the changes in his professional approach were small.

Limited Impact: Group 4

The last group is quite mixed in that it includes three cases where the impact was almost nil, others where the impact was significant in only a few areas, and some where the impact was broader but small. The group is distinguished from Group 3 by the fact that gains in self-confidence, enthusiasm, independence, and sense of adventure were high but redefinition of roles either in the school or beyond was small. As a group, the grantees made only small gains in the different competence areas, but this is not necessarily true of individuals, some of whom changed in ways similar to teachers in Group 2.

Maureen Levy's is one of the cases similar to those in Group 2. Maureen had observed the principal's interest in photography and the children's response to photographs taken around the school. She suggested to the principal that photographs and video could be exploited to develop children's language skills. The principal suggested an Innovations grant and converted their ideas into a proposal. Maureen had been teaching for 20 years, mostly in that school. She had no background in photography and was ambivalent about heading into something new. In anticipation, she took courses in video, photography and darkroom technique. The grant came through at the same time as the principal was transferred to another school. Maureen was devastated: she felt herself alone with a project, money, and a responsibility she couldn't handle. She lost sleep, and procrastinated for six months. She was slow to recognize that the new principal was also supportive: he arranged time release for her, extra funding from the school budget, and the renovations necessary to provide a darkroom. Maureen began experimenting in her own classroom and then, gradually and tentatively, involved other staff and other classes. The teachers, children and their parents were pleased with the project, and it has become a continuing feature of the school.

Maureen has continued to develop her interests in photography and video and has begun to expand her professional contacts. She is pleased with her increased confidence and sense of independence, and

with her developing skills in leadership and management. She says of her project, "I'm not sure what I've done for it, but it's certainly done a lot for me..... I think I've really grown. And I've learnt that to get involved in something new isn't as bad as you might think..."

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Alan Pengelly is one of five teachers in Group 4 whose projects we considered fairly "safe". Alan and his primary school class produced children's books which were used successfully to motivate language development. The children wrote the stories, did the art work, and took the photographs. They were responsible for proof-reading the manuscripts. Alan does not consider himself particularly adventurous. He had tried the approach, in a more primitive form, in another school and was confident of it. He is pleased with his project's success and the response of children and parents, but there has been little impact on him apart from a strengthening of his conviction about the value of the approach.

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Don Grenfell and Jack Hammond were the only grantees in our sample who considered their projects failures. Neither one really got off the ground. Don's plans had to be drastically altered and his enthusiasm was daunted when a co-operating school decided to withdraw from his project. Jack was unable to get teachers in his district to follow the interest they expressed into active use of the resource his projects provided. For both, their efforts to salvage their project resulted in some professional growth and considerable disappointment.

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Educational Relevance

The study has shown that school based innovation can have very positive effects on the professional development of the teachers involved. In the context of the School Commission's Innovations

Program, the study suggests that professional growth was large for approximately two-thirds of the grantees and significant in some respects for many others. For the majority of the grantees, personal satisfaction with their growth and their achievements suggests that development is likely to continue.

We cannot judge whether such growth can occur outside the context of the Innovations Program. The grantees, according to the School Commission's procedures, were highly selected. They were obliged to defend and clarify their proposals and to provide evidence of support for it from the principal and staff. They were given full responsibility for implementation, for management of a substantial amount of money, and for evaluation of their projects. Thus the award and the counselling support encouraged them to feel special, and the responsibility and accountability urged them to succeed. Many of the grantees commented that this responsibility "brings the best out of people."

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